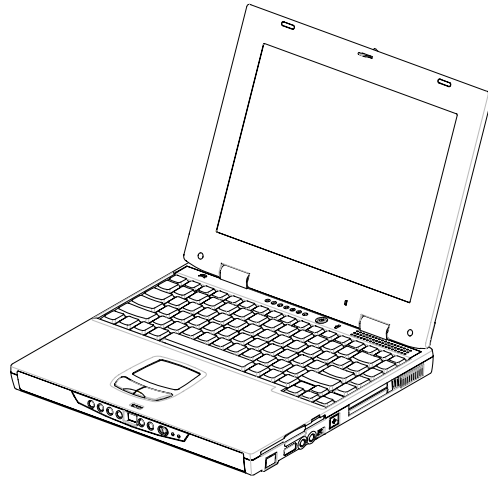




Model 700A User's Manual

Information in this document is subject to change without notice!!!

NOTICE

Specifications and information found in this manual are subject to change **without** notice. Any changes therefore will be incorporated in future editions. The manufacturer assumes **no** responsibility for errors or omissions in this document.

TRADEMARKS

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Standards

The following standards are adopted throughout this manual:

- Notebook in **boldface** (with or without capitalization) refers to the notebook computer which you have purchased.
- **Boldface** type is also used to highlight **important information** in this document.
- The messages which appear on the Notebook screen will be boxed when they are referenced.
- Whenever extra caution is called for, the information will be boxed in a dark frame preceded by "**Note:**" or "**Warning:**"
- Usually after performing a step-by-step instruction, you will be asked to:
 Press the **Esc** key
Which means you should press the Esc key located at the upper left-hand corner of the keyboard.

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Chapter 1 Introduction

Thank-you for purchasing our latest state-of-the-art Multimedia **notebook** computer! Whether you are a no-nonsense traveling business executive, who are occasionally tied down by your company's local area network, or a die-hard multiMedia fan who spends elaborated hours on the internet; you will find your investment on this **notebook** worth the money you have paid for a long time to come.

You are holding one of the most powerful, feature-rich and expandable **notebook** ever made. We encourage you to read over this manual to familiarize yourself with all the capabilities that your machine has to offer. For those of you who just cannot wait to get start, please take time to read the *Safety Instructions* at the very beginning of this manual, the *Overview* in this chapter, the basic operations in *Chapter 2*, and *Configuring Your System* as explained in *Chapter 11*. Then you can go ahead and get start with your new **notebook**!

Overview

Internally, the **notebook** uses the Intel's latest generation of Pentium III SpeedStep processor, and Intel's premium North-Bridge/South-Bridge PCI bus architecture. The ATI's latest VGA chip-set together ESS's audio chip-set has made this **notebook** is an ideal choice for sober MultiMedia lovers. Externally, the **notebook** provides a wide choice of ports and connectivity; such as PCMCIA socket, USB ports, infrared port, internal fax/modem port (optional), LAN connection port (optional), external CRT, Television (NTSC/PAL), and many others. This would definitely make the life of a travel executive a lot easier, off-site, at home, and in the office.

With this **notebook**, upgrades have never been easier. You can switch CPU processor among the Intel's Pentium III 400MHz to 700MHz. Your system memory is easily upgradeable from 64MB up to 512MB. The hard disk system can handle most of the 9.5mm or 12.7mm IDE industry standard drives, giving you virtually unlimited storage capability.

Battery life (or more appropriately the duration of which a **notebook** unit be able to operate without an AC outlet) is an important issue. Knowing this, we have incorporated

the latest **Advanced Power Management** (APM) and/or **Advanced Configuration Power Interface** (ACPI) for energy saving.

While we hope that this overview has made you aware of some the most exciting features of your new computer, there is still much more to the **notebook**. The remainder of this manual is dedicated to helping you get the most out of your new **notebook**. Please read each chapter carefully and we recommend you to explore each of the explained functions.

Now, read on to find out more about what the amazing **notebook** can do for you!

1.1 Standard Features

SYSTEM

- Intel μ PGA-II Pentium III 400MHz to 700MHz with 64KB L1 cache and 128KB/256KB L2 cache.
- Core Logic: North Bridge, Intel AGPset FW82443ZXM-100.
South Bridge, Intel PCIset PIIX4 FW82371.
- Two S.O. DIMM memory sockets upgradeable from the basic 32MB to 256MB memory.
- 256Kb Flash ROM contains BIOS and is easily user upgradeable.
- Hard Disk Drive (HDD) is conveniently user changeable.

DISPLAY

- ATI RAGE Mobility-M1/M3 PCI/AGP 1x/2x with MCM memory 8MB, and 16MB.
- LCD only, CRT only, TV only, and LCD/CRT simultaneous.
- Display Panel: TFT 12.1" XGA, 800*600
TFT 13.3" XGA, 1024*768
TFT 14.1" XGA, 1024*768

STORAGE DEVICE

- User changeable industry standard 9.5mm hard disk drive, or latest Ultra DMA 33 hard disk drive.
- Industry standard 3.5inch 1.44MB floppy disk drive.
- 32x CD-ROM, or 8x DVD-ROM drive.

KEYBOARD

- 87 full keys, including 2 Windows keys, and embedded numerical keypad.
- External PS/2 keyboard connector located on the back of **notebook**.

CONNECTIVITY and EXPANSION

- Built-in TouchPad, IBM PS/2 mouse compatible.
- One Serial D-type 9-pin COM1 connector.
- One 6-pin mini DIN external keyboard, or PS/2 mouse connector.
- One 15-pin D-type connector for external VGA monitor.
- One parallel port 25-pin D-type for printer, or pocket LAN. High-speed bi-directional port under either hardware or software control (EPP/ECP compliance).
- One type 2 PCMCIA slot.
- Two USB connectors.
- One earphone connector.
- One external microphone-in connector (mono).
- One S-Video jack for television connection.
- One RJ11 Fax/Modem connector.
- One RJ45 LAN connector.
- One IEEE 1394 connector.
- One IrDA port.

POWER

- One battery slot to support 3000mAH Lithium Ion (Li-Ion), or 4500mAH Nickel Metal Hydride (NiMH) battery pack.
- Offline battery charging time is around two-and-a-half hours.

- Full range 100 to 240V auto-switch AC adapter.

PHYSICAL

Weight (TFT color, 14.1") : 3.2kg
Length/Width/Height : 305.0mm/250.0mm/39.5mm

Note: Weight and height might change due to different configurations and models.

ENVIRONMENT

Operating Temperature : 10°C to 35°C
Non-Operating Temperature : -20°C to 60°C
Humidity : 20% to 80% non-condensing
Shock : 5G operating, 60G non-operating
Vibration : 3-200Hz @ 1.0G operating
: 3-200Hz @ 1.5G non-operating

Warning: Don't expose your **notebook** to excessive heat or coldness (frost).
Don't drop, spill fluids or open the exterior of the case. This can
damage the **notebook** and void the warranty.

POWER MANAGEMENT

Industry standard Advanced Power Management (**APM**) 1.2, and Advanced
Configuration Power Interface (**ACPI**) 1.0.

OPERATING SYSTEM

Windows 98 SE (ACPI or APM), Windows 2000, and Windows Millennium.

OPTIONS

- Standard SDRAM S.O. DIMM self-fresh 32MB, 64MB, and 128MB memory module for expansion from 32MB to 256MB.
- Additional Lithium Ion (Li-Ion), or Nickel Metal Hydride (NiMH) battery pack.
- LAN/Modem Combo Card for Ethernet LAN connection and Fax/Modem connection.

1.2 Special Features

Power Management

- Power Saving can be switched to **Customized** or **Disabled** in the BIOS Setup.
- System will enter **Suspend-To-RAM** mode (with the LCD panel automatically turned off), when the cover is closed.
- Advanced Power Management (APM), and ACPI supports.
- Depending on user's setup, system enters **Suspend Mode (Suspend-To-RAM or Save-To-File)** when no device activity occurs after an user selected time duration.
- In **Suspend-To-RAM** mode, all major devices and components (including VGA chip and LCD panel) are shutdown to save energy.
- In **Save-To-File** mode, system is completely shutdown for energy saving. **Low Battery Activity** allow system to save memory contents and system activities into a disk file called **Save-To-File** (refer to *Chapter 10*). When you power on the system again, the system will return to exactly where you left off.
- The Hard Disk Drive, HDD, would spin down for power saving if there is no HDD access for an extended period of time.

Memory Expansion

System Memory, upgradeable from 32MB to 256MB. For more information, refer to *Chapter 7*.

Hot Keys

Please see *Appendix B* for all available **Hot Key** functions; such as Contrast and Brightness adjustment, and **Suspend-To-RAM** and **Save-To-File** etc.

TouchPad

The TouchPad is conveniently located, making it easily accessible to both left and right handed people. There are two buttons at the bottom of the TouchPad, emulating the right and left mouse buttons. Use your finger as a mouse pointer to draw lines or point to an item as needed. Double click (tap) on the TouchPad to simulate mouse button clicking.

Note: You are advised to clean your TouchPad with a dry cloth in a regular basis. Grease, dirt, and moisture on the TouchPad can lead to abnormal mouse operations.

PCMCIA

PCMCIA card provides many powerful features for your **notebook**. Many cards are available today such as: Fax/Modems, Network Adapter, and SCSI Adapters. The PCMCIA unit in your **notebook** provides connections to one type 2 (5mm height).

SOUND SYSTEM

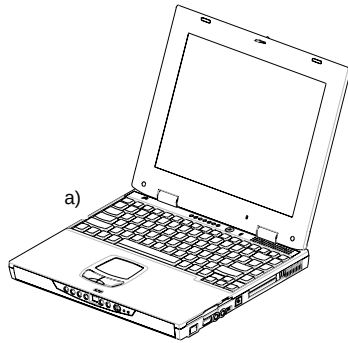
This internal sound card provides you 16-bit CD-quality stereo sound, and it is Sound Blaster Pro compatible. The **notebook** includes built-in stereo speakers, microphone, and connectors for line-in, line-out, microphone-in, and earphone.

Chapter 2 Before You Begin

Please read this section before you start using your computer.

2.1 Checking What You Received

Your **notebook** package should contain the following items:



- a) The **notebook** (without Battery Pack).
- b) Battery Pack
- c) AC Adapter
- d) AC Power Cable
- e) CD-ROM Disc (for Drivers/Utilities)
- f) User's Manual



b)



c)



d)



e)

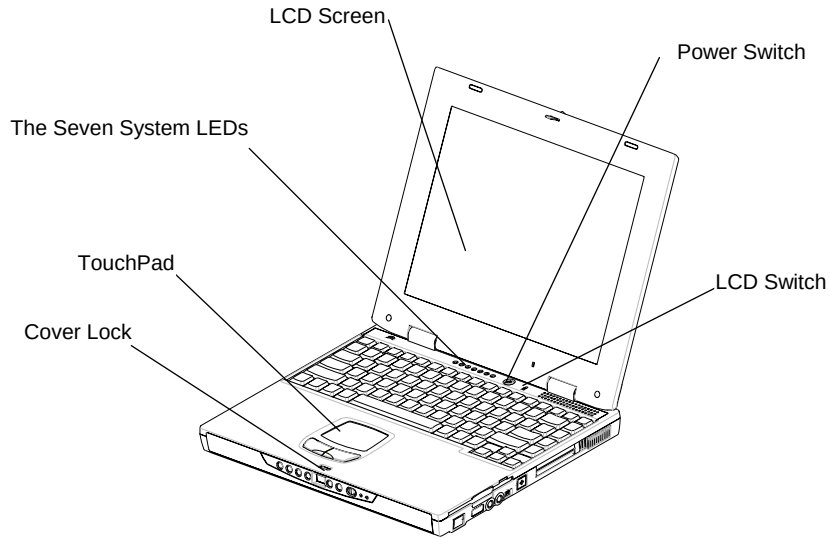


f)

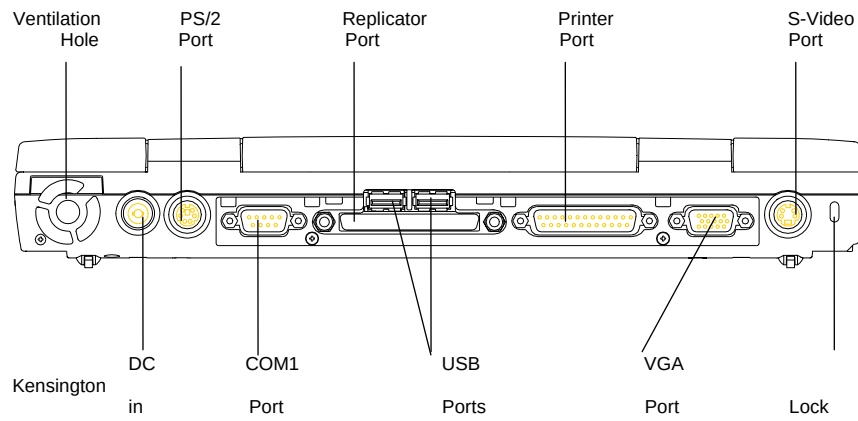
Note: You should keep the original factory carton and packing materials in case you need to ship the unit back for servicing.

2.2 Examining Your Computer

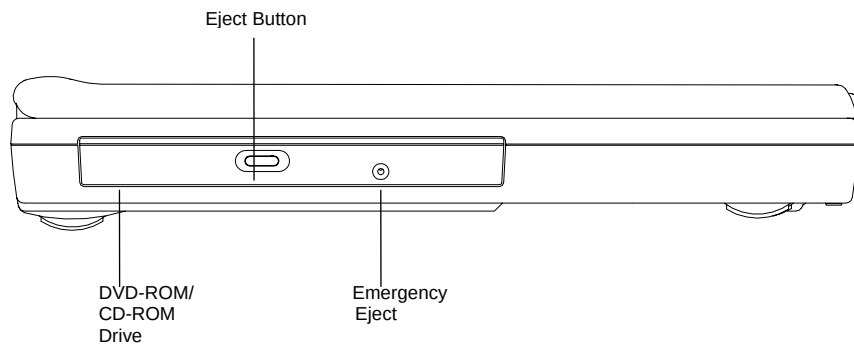
Before you start using your computer, you need to get acquainted with your **notebook's** main features and interfaces:



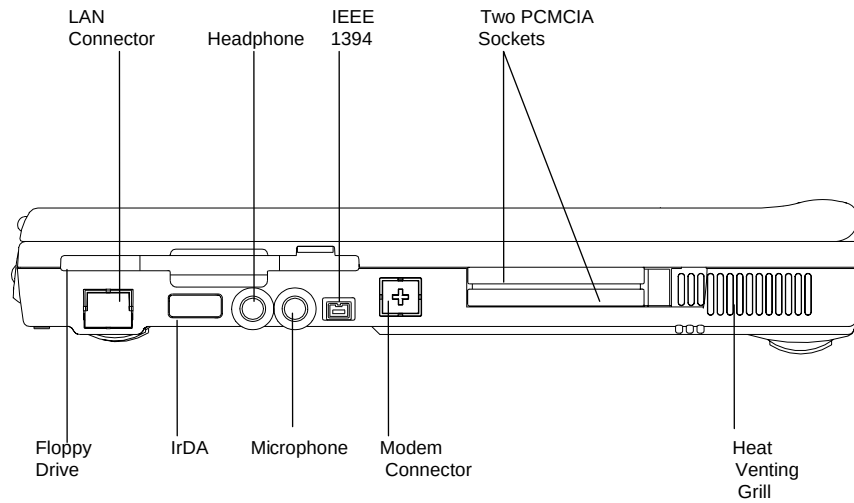
A Panoramic View of the notebook



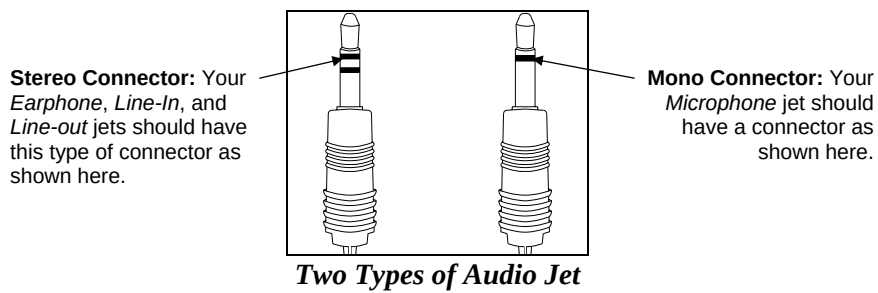
Rear View

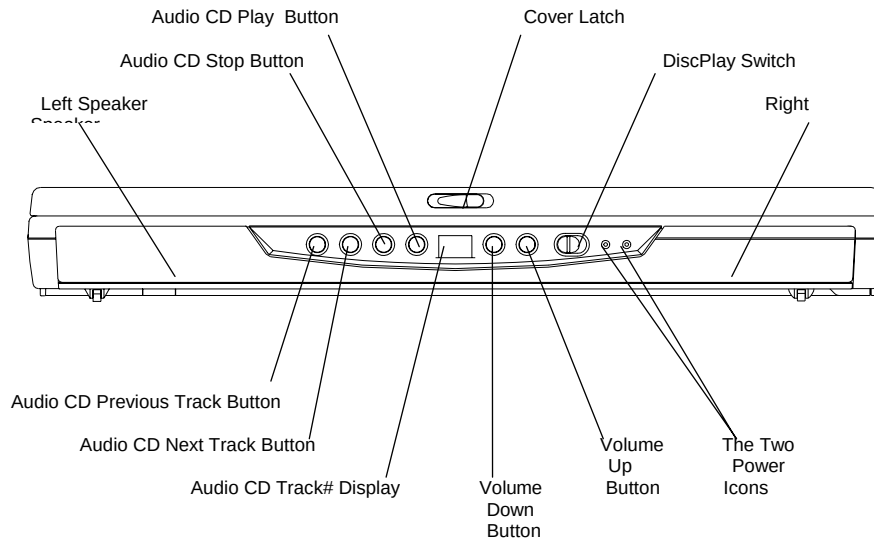


View of the Left Panel



View of the Right Panel





View of the Front Panel

The DiscPlay Function

Your **notebook** supports a state-of-the-art **DiscPlay** Function, whereby you can playback audio CD without booting up the system. With a fully charged battery, the system can continuous play audio CD for several hours. The buttons listed below work only when the system is in **DiscPlay** mode:

- Audio CD Play Button
- Audio CD Stop Button
- Audio CD Previous Track Button
- Audio CD Next Track Button
- Volume Up Button
- Volume Down Button

You can switch the **DiscPlay Function** on/off by pressing the **Discplay Switch** to the right. The **DiscPlay** can be switched ON only when the system is not booted up, or when the system is in **Suspend-To-File (STF)** mode.

2.3 The Two Power LEDs



The Battery Pack LED

- LED on- The battery pack is being recharged
- LED off- The battery pack is fully recharged
- LED flashes (1/2 second on; 1/2 second off)- The battery pack is either in **Battery LOW-2** stage, or the battery pack is in **pre-charge**.
- LED flashes (1 second on; 2 second off)- The battery pack is bad



The Power On LED

- LED on- The system is powered on
- LED off- The system is powered off
- LED flashes- The system is in Suspend-To-RAM (S2R)

Note: For exact location of the Two Power LEDs, please refer to the **View of the Front Panel** diagram in *Chapter 2.2*.
For more information on **Battery Low-2** and **pre-charge**, please refer to *Chapter 6*.

2.4 The Seven System LEDs



The AC Adapter LED

This LED would be lit when the **notebook** is power by the AC power source.



The CD-ROM/DVD-ROM LED

This LED would be lit when the **notebook** is accessing the CD-ROM, or the DVD-ROM drive.



The HDD LED

This LED would be lit when the **notebook** is accessing the HDD drive.



The FDD LED

This LED would be lit when the **notebook** is accessing the FDD drive.



The NUM Lock LED

This LED would be lit when the keyboard is in Num Lock mode. In this mode, all the embedded numeric keypads can be used.



The CAPS Lock LED

This LED would be lit when the keyboard is in Caps Lock mode. In this mode, all alphabet characters you type are in upper case.



The Scroll Lock LED

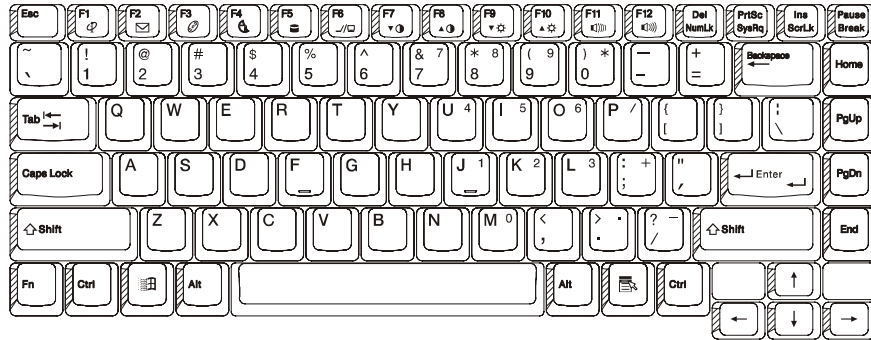
This LED would be lit when the keyboard is in Scroll Lock mode. In this mode, you can lock cursor position while scrolling a document with the arrow-scroll keys.

Note: The **Seven System LEDs** are located somewhere between the LCD panel and the keyboard. For exact location, please refer to the **Panoramic View** diagram in *Chapter 2.2*.

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Chapter 3 Keyboard

The **notebook** features an enhanced keyboard that incorporates the functions of a full-featured desktop keyboard. An embedded numeric keypad, accessed via the **NumLock** key is included. The screen control keys are conveniently located near the right side and lower right corner of the keyboard.

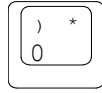


US Keyboard Layout

3.1 General View

The keyboard has a total of 87 keycaps, including 2 Windows keys. Some keycaps have multiple symbols on them. Their functions can be accessed via different key combinations:

EXAMPLE:



To access the "0", press the key only.

To access the ")", press the **shift** and the key.

To access the "*", press the **NumLock** first, then press the key.

F1 to **F12** keys are Function Keys

CapsLock Key:

When the CapsLock indicator light is on, the letters are typed in upper-case. When the CapsLock indicator light is off, all letters are typed in lower-case.

Print Screen Key:

By pressing the **PrintScreen** key, the characters or text shown on the screen will be printed on your printer.

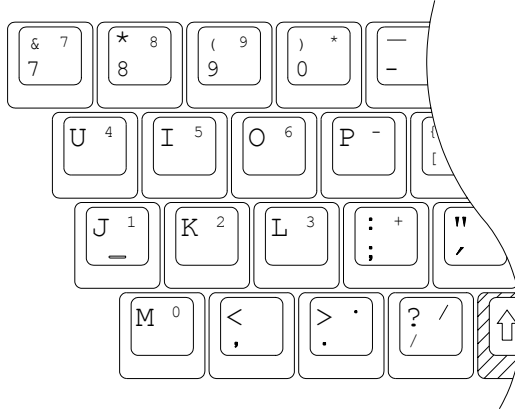
Warning:

Don't press the **PrintScreen** key unless a printer is connected to the **notebook**. Otherwise the system may hang.

3.2 The Embedded Numeric Keypad

The figure below shows the embedded numeric keypads which can be activated via the **NumLock** key.

The **NumLock** key which is located near the upper right corner of the keyboard is printed in blue color, and the keys on the embedded numeric keypad are also in blue color.



3.3 Other Keys

The **Fn** Key:

The (Function) **Fn** key is located at the bottom-left corner of the keyboard. This key is used to access the **notebook**'s system "**Hot Keys**" or "function keys". For example, to change the **notebook** into a simultaneous video mode, you hold down the **Fn** key while pressing the **F6** key.

For more information on the **Fn** or **Hot Keys**, see *Appendix B*.

The **Ctrl** (Control) Key:

Both **Ctrl** keys have the same function. Holding down the **Ctrl** key together with another key can activate certain functions of an application program; such as **Excel** or **Word**.

The **Alt** (Alternate) Key:

Both **Alt** keys have the same function. Holding down the **Alt** key together with another key can activate certain functions of an application program; such as **Excel** or **Word**.



The Windows () Key:

This Windows key has the same function as selecting the **START** icon in Windows OS.



The Windows () Key:

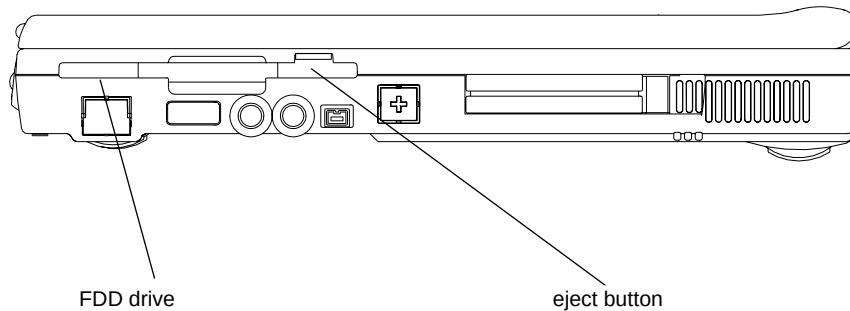
This Windows key has the same function as clicking the right mouse button, when in Windows OS. This key can activate certain functions of an application program; such as **Excel** or **Word**.

Chapter 4 FDD/HDD Drives

Your **notebook** comes with a factory-assembled Floppy Disk Drive (FDD), and removable Hard Disk Drive (HDD). For their exactly external feature and position, please refer to *Chapter 4.1* and *Chapter 4.2*. *Chapter 4.3* describes how the removable HDD can be taken out.

4.1 The Floppy Diskette Drive (FDD)

The FDD is used to transfer data to and from your hard disk via 3.5 inch diskettes. It can read and write files from both 720KB and 1.44MB (2HD) floppies formatted for IBM compatible computers. In order to use a diskette for the first time, it needs to be formatted; otherwise the computer cannot read or write to it.



The Left View of notebook

Note: By formatting a diskette, all information in the diskette will be lost!

4.2 Removal Hard Disk Drive (HDD)

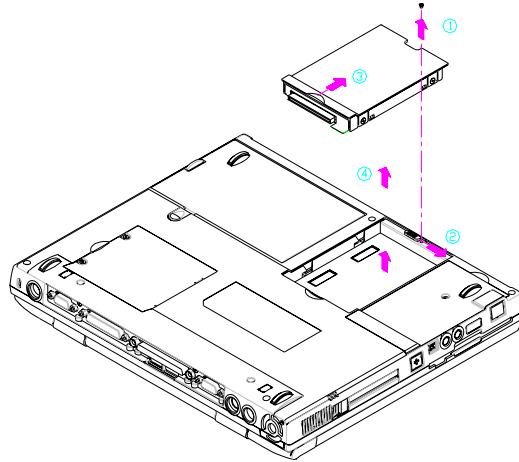
Your **notebook** is equipped with a replaceable HDD. The HDD can easily be upgraded to higher capacities. Your **notebook** is compatible with most industry standard 9.5mm IDE interface hard disk drives. Consult your dealer for more information.

When the **notebook** is accessing the HDD, the HDD LED (*Chapter 2.4*) would be lit. The hard disk would spin-down if there is no disk access for an extended period of time. Disk accessing will wake the drive up, but reading or writing is enabled after the motor spins back to normal speed. "Spin up" needs about 4~5 seconds to reach normal speed.

Note: CAUTION! Always keep a backup of your files on HDD to prevent data loss.
--

4.3 Removing the Hard Disk Drive

Your Hard disk drive is easily removable and can be replaced or upgraded. There are many advantages to having more than one hard disk. For example, separate hard disk for each person that uses the computer, or separate hard disks for different purposes.



Follow these steps to remove the hard disk drive.

- **Make sure the system is powered off.**
- Remove the screw as shown by **arrow 1**.
- Press the handle to the right as shown by **arrow 2**.
- Press the handle up as shown by **arrow 3**.
- Lift the HDD drive up as shown by **arrow 4**.
-

Note: Reverse the above steps to install a hard disk drive. If you have just changed a HDD, don't forget to change the settings in **Pri Master** of the **Main Setup**, unless you have **Pri Master** set to **Auto**. For detail, see *Chapter 11.3*.

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Chapter 5 The LCD Screen

The **notebook** has several screen options: DSTN (Dual Scan)/TFT (Active Matrix) with resolution/color in 800x600x64K (SVGA) and 1024x768x64K (XGA).

5.1 Adjusting Contrast-Brightness

The **notebook** uses "Hot Keys" to adjust contrast and brightness.

Contrast Control:

Press and hold down the Function key couple <Fn> <F7> together or <Fn> <F8> together to adjust the Contrast.

Note: Contrast cannot be changed on the TFT models!

Brightness Control:

Press and hold down the Function key couple <Fn> <F9> together or <Fn> <F10> together to adjust the Brightness.

5.2 LCD/CRT/TV Display

By pressing and holding down the Function key couple <Fn> <F2> together, you can switch your display between: LCD only , CRT only, and LCD/CRT simultaneous. By pressing and holding down the Function key couple <Fn> <F6> together, you can switch your display between LCD and TV.

Note: When you switch your display from **CRT Only** to LCD/CRT (**simul**), the following symptoms may occur:

- Depends on your CRT, the size of the screen may be different from (smaller/larger than) the size CRT displayable area.
- The displayed screen is off-centered.
- The screen flickers.

The symptoms are caused by the lower CRT refresh rate when **simul** display is selected. This problem is usually more severe in DSTN than in TFT. If you want a better display, you should select **CRT Only**.

5.3 Resolutions and Colors

TFT :

Depending on the different drivers under Windows, DOS or other operating systems; you can have different resolutions with different fonts and colors. For more information on Display Modes, run the utility software supplied with your **notebook**. See *Chapter 10*, for installation procedure.

CRT :

The resolutions on the CRT depends on both the CRT and its driver program. The VGA driver supplied can display up to 1024x768 (non-interlaced) under the Windows environment.

Note: To get the fastest speed and most colors under Windows, you need to install the VGA drivers that comes along with your **notebook**. For more information on how to install the drivers, see *Chapter 10*.

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Chapter 6 Battery

6.1 Battery Pack

Depending on model, included with the **notebook** is one high energy rechargeable **Lithium Ion (Li-Ion)**, or **Nickel Metal Hydride (NiMH)** battery pack. In general, a fully charged battery pack can support around 2-3 hours of operation, with Power Management option enabled. However, difference in configuration (CPU, HDD, Memory etc.) and system utilization (especially I/O activities) can affect the operation time greatly.

6.2 Recharging the Battery Pack

Your **notebook** supports both on-line and off-line recharge. Follow the procedure below to recharge battery:

- Make sure the battery pack is installed in the **notebook**.
 - Connect the AC Adapter to the **notebook** and to an electrical outlet.
- When a battery pack is being recharged, its **Battery Pack LED** would be "ON". For detail on the LEDs, please refer to *Chapter 2.3* and *Chapter 2.4*. While the **notebook** is OFF, a depleted Li-Ion (NiMH) battery pack will take three hours (two hours) to recharge.

6.3 Questions and Answers:

Q: I can feel the heat next to the **TouchPad** during recharge. Is it normal?

A: The battery will generate heat during recharging and discharging. There is protection circuit inside the **notebook** to prevent overheating. User needs not to worry.

Q: My battery operation time isn't as long as it should be. Why?

- A: The battery is heat sensitive and can only be charged to its maximum if the battery and its environmental temperature is within 15-25°C (59-77°F). The more the temperature deviates from this range during recharging, the less chance there is for the battery to be fully charged. In order to recharge the pack to its full capacity, users are requested to cool down the unit by unplugging the AC Adapter. Wait until it is cooled down, then plug in the AC Adapter to start recharging again.
- Q: I didn't use my spare battery for a few days. Even though it was fully recharged, there wasn't as much power left as a newly charged one. Why?
- A: The batteries will self-discharge (2-5% per day for NiMH, and 1% per day for Li-Ion) when they are not being recharged. To make sure a battery pack is fully charged, recharge before use. Always keep the battery inside the **notebook** and have the AC adapter connected whenever possible.
- Q: I didn't use my spare battery for months. I have problem in recharging it.
- A: If you happen to leave your battery pack to go through an extended period of self-discharge, say more than three months, the battery voltage level will become too low and needs to be **Pre-Charged** (to bring the battery voltage level high enough) before it can automatically (for Li-Ion only) resume its normal **Fast Charge**. **Pre-Charge** may take 30 minutes. **Fast Charge** usually takes 2~3 hours.
- After completion of **Pre-Charge**, NiMH battery pack will exhibit some abnormal behavior during **Fast Charge**. This is the characteristics all NiMH rechargeable battery. What you experience is a pre-matured termination of recharge. After leaving your battery pack un-used (in storage) for months, the first couple of (**Pre-Charge**) recharge will last for a relatively short while, say 10 minutes, and recharge will terminate prematurely and indicate incorrectly that the pack is fully charged. In reality, the battery is not fully recharged. If this happens, take the battery pack out and return it back for recharging. Repeat this take-out and return-back operation until the pack is actually being recharged. A rule of thumb to tell if the recharge is "real" or "fake" is as follows. A "real" recharge will generate heat, while a "fake" recharge will not.

6.4 Battery Button, LEDs and Alarm

After you battery pack is removed from the battery pack compartment, you can find the battery pack is equipped with a battery button, and four LEDs, with each LED signifying approximately 25 percent energy level. For detail, refer to table below.

LED Indicators	LEDs Lit	Energy Level
■ ■ ■ ■	4	75%~100%
■ ■ ■ □	3	50%~74%
■ ■ □ □	2	25%~49%
■ □ □ □	1	0%~24%

The LEDs will be lit up only when the battery button is pressed. Once you let go of the battery button, the LEDs would be off. The LED on the extreme left is red in color. Depends on the type of battery pack (Li-Ion, or NiMH) being used in your **notebook**, the external outlook and exact position of the battery button and LEDs may be different. However, the following rule of thumb governs.

Battery LOW 1

When the battery charge is depleted to approximately its 10-15% level, the **notebook** is said to reach the **Battery LOW 1** state. The system will give out three long beeps. And the system will continue to draw power from the battery pack until the battery pack reaches **Battery Low 2** level.

Battery LOW 2

The **notebook** is said to reach the **Battery LOW 2** state, when the battery is depleted to approximately 5-10% level. In this case, the system will give out a continuous beep. If **Save-To-Disk file** has been created and **Suspend Mode** (refer to *Chapter 11.6*) set to **Save-To-Disk**, **Save-To-Disk** will be performed automatically by the system. For detail on **Save-To-Disk file**, refer to *Chapter 10.1*. Without the **Save-To-Disk file**, you are having the risk of running out of power soon. If you haven't saved your work, now is definitely a good time to do so. Otherwise all modifications you have made since last save will be lost.

6.5 Battery Maintenance

To maintain the battery pack's maximum capacity, you should occasionally let the **notebook** deplete its battery power completely before recharging.

To carry out a complete depletion of the battery, disconnect the AC adapter and let your **notebook** consume the remaining battery power. To speed up the depletion, use the FDD and HDD as much as possible, and the LCD be set as bright as possible. When the battery is empty, wait for the **notebook** to cool down (especially the battery). The temperature should be within 15-25°C (59-77°F). Then insert the AC adapter to recharge the battery.

6.6 Power Consumption

The **notebook**'s Power Management System reduces power consumption when the computer is running. Power reduction is accomplished via an activity monitor which reduces CPU's clock speeds and puts peripheral devices in low power consumption stage during periods of "inactivity" (i.e. power is ON but the computer is idle). In general, these power saving functions work independent of any DOS or Windows applications.

LCD Cover Switch

If the **LCD Suspend** in the SETUP's **Power Setup** sub-menu is set to **enabled**, the **notebook** will automatically enter **Suspend Option** when you have the display flipped down. For detail on **LCD Suspend** and **Suspend Option**, please refer to *Chapter 11.6*.

Hard Disk Time Out

Depending on the timer setting in the **Power Setup** (See *Chapter 11.6*), HDD will spin-down; thus consumes less power. When there is any disk accessing, HDD will automatically wake itself up before performing any disk accessing. The wake-up, or spin-up, time varies from HDD manufacturers to manufacturers.

Suspend-To-RAM

There are three ways to enter **Suspend-To-RAM** mode:

- Press the **Hot Keys** <Fn> <F4>.
- Allow the system to invoke this action, by setting the **Auto Suspend Time Out**, and setting the **Suspend Mode** to **Suspend(-To-RAM)** in *Chapter 11.6*.

- With **Suspend Mode** set to **Suspend(-To-RAM)** in *Chapter 11.6*, flip down the LCD panel.

When in this mode, electrical power is removed from the LCD display panel. Only content of the **RAM** is maintained. To wake the system from **Suspend-To-RAM**, just press any key on the keyboard.

Save-To-File (Hibernation Mode)

There are four ways to perform **Save-To-File (STF)**:

- Press the **Hot Keys** <Fn> <F5>.
- Allow the system to invoke this action, by setting the **Auto Suspend Time Out**, and setting the **Suspend Mode** to **Save-To-File (STF)** in *Chapter 11.6*.
- Press the system's power switch for less than 4 seconds.
- System would perform **Save-To-File (STF)** automatically when system entering **Battery LOW 2**. For detail on **Battery LOW 2**, refer to *Chapter 6.4*.

When **Save-To-File (STF)** is invoked, all data in memory and system status will be saved to the **Save-To-Disk file** (refer to *Chapter 10.1*). The system will shut the power down automatically. When you power-on the computer again, you will return exactly where you left off.

Note: For more information on **Suspend(-To-RAM)**, and **Save-To-File (STF)**, refer to *Chapter 11.6* and *Chapter 10.1*. For more information on **Hot Keys**, see *Appendix B*.

Note: If the file for **Save-To-File (STF)** has not been created, system would actually perform a **Suspend(-To-RAM)** when a **Save-To-File (STF)** request is issued.

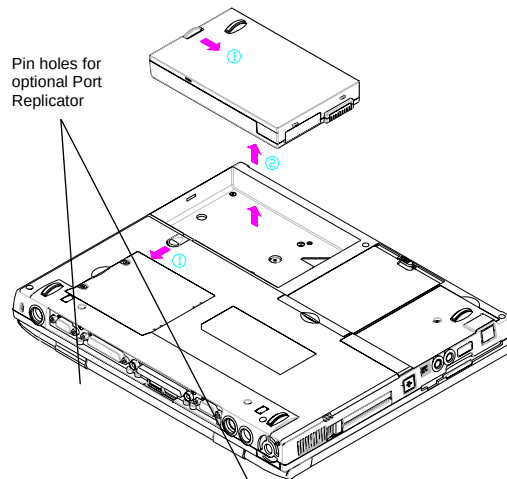
6.7 Reducing Power Consumption

Although power conservation is a built-in function of your **notebook**, there are measures you can take to reduce the power consumption:

- Use the AC power whenever possible (for battery only).
- Lower the intensity of the LCD backlight. A very bright screen translates to higher power usage.
- Try to use the HDD or the PCMCIA drive to read and write files, rather than using the FDD.

6.8 Removing/Inserting The Battery Pack

Your battery can easily be removed and replaced. Make sure that the computer is powered off before changing. If you would like to change the battery while power is on, make sure the AC Adapter is inserted or that you have saved your work via the **Save-To-Disk** feature.



Follow these steps to remove the battery pack:

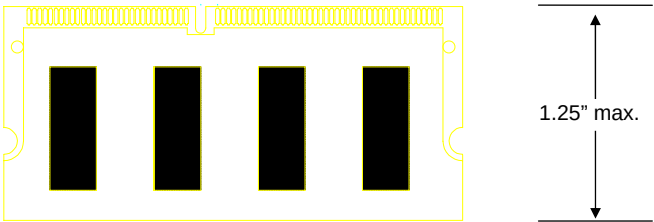
- Press the handle to the down-left directions as shown by **arrow 1**. At the same time, press another handle to down-right direction as shown by **arrow 1**.
- Lift the battery pack up as shown by **arrow 2**.

To insert battery, reverse the steps above.

Chapter 7 Memory

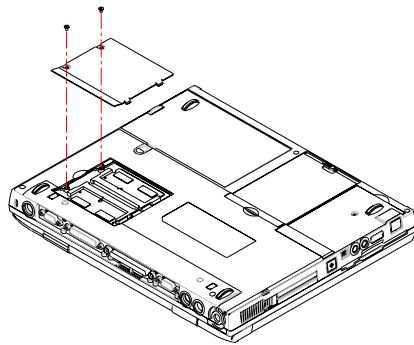
Your **notebook** is equipped with a highly configurable memory sub-unit. Industry standard SDRAM S.O. DIMM memory modules, 32MB/64/128MB, are available for memory upgrade from 32MB up to 256MB. There are two memory sockets: both on the bottom side of system board. The table below illustrates some of the most popular way that system memory can be configured.

Total Memory	Bank A	Bank B
32 MB	32 MB	None
64 MB	32 MB	32 MB
	64 MB	None
96 MB	32 MB	64 MB
	64 MB	32 MB
128 MB	64 MB	64 MB
256 MB	128 MB	128 MB

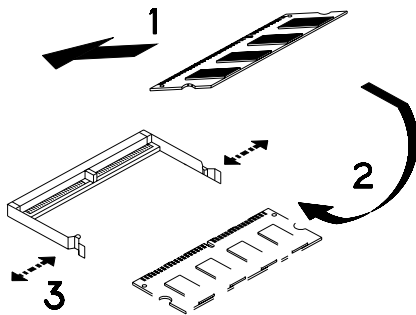


SDRAM S.O. DIMM Memory Module

7.1 Inserting/Removing Memory Module



The diagram on the left shows where the two memory sockets are located; and how the compartment door is opened.



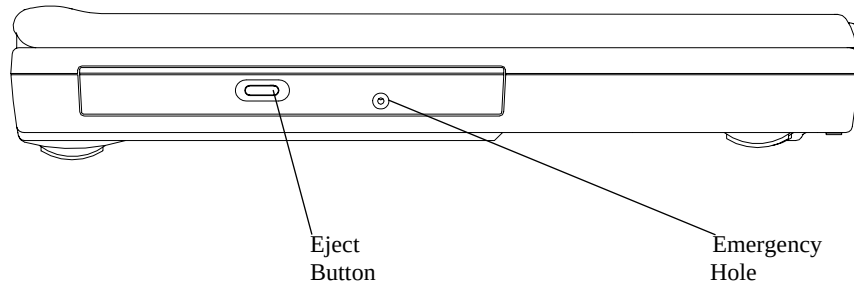
The diagram on the left shows the procedure on how individual memory modules be inserted into its socket:

- When inserting, the module should have an angle of 45° with the motherboard.
- Gently press the module down as shown by **arrow 2**.
- You will hear a clicking sound when the spring-locks (as shown by **arrow 3**) bent outward and then bend inward to lock the memory module.

Chapter 8 The CD/DVD-ROM Drive

Depending on the model you have, your **notebook** is equipped with either a (32x max) CD-ROM drive, or a (8x) DVD-ROM drive.

8.1 The CD/DVD-ROM Drive Panel



CD/DVD-ROM Drive Panel

Eject Button

Press this button to open or close the disk tray. When the **Eject Button** is pressed, you will hear a clicking sound and the disk tray will eject.

Emergency Hole

When the **notebook** is powered off, the **Eject Button** does not function. To open the CD-ROM or DVD-ROM drive, insert a metal rod (an extended large paper clip with diameter of 1.2 mm or less is suitable) into this hole, then push the rod to eject the drive.

Note: Different CD-ROM/DVD-ROM models may have different front panel.

8.2 DISC Loading/Ejection

Disc Loading

- Press the Eject button on the front panel to release the disc tray.
- Gently pull the disc tray to its fullest extend.
- Place the disc on the tray with its labeled side facing up.
- Gently push the disc tray back into the drive.

Disc Ejection

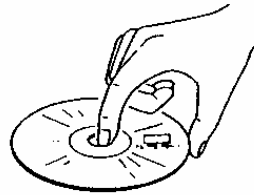
- Press the Eject button on the front panel to release the disc tray.
- Gently pull the disc tray to its fullest extend.
- Remove the disc from the disc tray, and put it in its protective case.
- Gently push the disc tray back into the drive.

8.3 ROM Disc Maintenance

Disc Handling

When removing a disc from its protective case or loading a disc to a drive, hold it by its edges as shown in figure below. **NEVER** touch the disc's data surface (non labeled side.)

To protect the disc against scratches and dirt, keep it in its protective case when not in use.



Disc Cleaning

When cleaning the disc, be sure to wipe it from center to edge. Don't wipe the disc in a clockwise/counter clockwise direction. Otherwise, this can damage the disc. Keep the discs away from high temperature and high pressure.

Chapter 9 Peripherals

You can attach a great variety of accessories to your **notebook**'s ports. Each port will be described below.

9.1 PS/2 Keyboard Connector

The **notebook** includes a 6-pin mini DIN Connector. You can use this connector to attach an external keyboard, or PS/2 mouse.

9.2 Parallel Port

The **Parallel Port**, also known as the Printer port, uses a standard D-type 25-pin connector. You can connect either a pocket LAN adapter, a printer or any EPP/ECP device to this bi-directional port. This port can be controlled either through BIOS setup or application programs. For detail, refer to **Parallel Port** in *Chapter 11.6*.

9.3 COM Port

This **COM Port** allows external **Fax/Modem**, serial **Mouse**, or any other standard RS-232C devices to be connected to your **notebook**. Since this port is equipped with a high speed buffer (16550 compatible), it supports high-speed serial devices, such as 28.8 Kbps Fax/Modem. This port is a 9-pin D-type standard connector. If your peripheral uses the larger 25-pin connection, ask your local dealer for a 9-pin to 25-pin converter.

9.4 USB Connector

You can attach a great variety of industry standard USB devices, including the nowadays more popular USB mouse, USB keyboard, digital camera, and others.

9.5 VGA Connector

You can attach a **VGA** or **Super VGA** Monitor (CRT) to the standard 15-pin D-type **VGA Connector**. The **notebook** has the capability to display to the LCD and the external Monitor (CRT) at the same time.

9.6 S-Video Connector

The **S-Video** port provides video-out connection to television. The most two popular television protocols are NTSC and PAL. Before making the connection to any television, you are advised to set the **TV Display** field of the **Main Setup** of the BIOS SETUP. For detail, please refer to *Chapter 11.3*.

9.7 Audio Jacks

The **notebook** has four built-in **Sound Jacks** and one **Volume Dial**:

Mic In: A microphone can be connected to record speech, music or sounds.
Input impedance is 30kohm ~ 100kohm.

Earphone: You can connect your earphones, speakers or tuner system. Output impedance is 8ohm.

9.8 PCMCIA Port

The **PCMCIA** slot gives you wide variety of connection to different options such as: Fax/Modem, Flash Memory, SCSI Adapter, LAN connection, HDD, and etc.

Even **Win95/Win98** has built-in support for **PCMCIA** cards and will recognize any “plug and play” compatible **PCMCIA** cards after its insertion. Before inserting a card into the **PCMCIA** slot, be sure that you have installed the **PCMCIA** drivers (*Chapter 10*) that come with the **notebook**. Otherwise, the **notebook** may not be able to recognize that a card has been inserted.

9.9 IrDA Port

The **IrDA** provides infrared transmission rather than via an attached cable. With this feature, you can transfer data without cable attachment. Just place the **IrDA Port** of the two devices (e.g. a **notebook** and a printer both equipped with **IrDA Port**) within line of sight distance (typical: 1.0meter; $\pm 15^\circ$), and run the **IrDA** software. And data will be transmitted between the two devices through infrared rays. This **IrDA Port** has a transmission rate up to 4Mb/s baud.

9.10 Fax Port

The **Fax/Modem** Port uses RJ11 connector that lets you connect your **notebook** to the public telephone network for various applications such as: internet, fax machine emulation, and telephone answering machine functions.

9.11 Ethernet LAN Port

The **Ethernet LAN** Port uses RJ45 connector that lets you connect your **notebook** to the LAN (**L**ocal **A**rea **N**etwork).

9.12 IEEE 1394 Port

You can connect the system to equipment that supports the IEEE 1394 industry standard interface.

Chapter 10 The CD-ROM Disc

This **notebook** is designed to support the latest operating systems which include Windows 98™, Windows NT 4.0™, Windows 2000™. The CD-ROM Disc inside your **notebook** package contains utilities, drivers, and programs for DOS and different Windows operating systems.

10.1 DOS Utilities and Drivers

The following DOS Utilities are located in the directory “**DOS**” of the CD-ROM Disc:

- System BIOS Flash Utility
- Keyboard Controller (KBC) Flash Utility
- “**Save-To-File**” File Creation Utility
- CD-ROM Driver
- DVD-ROM Driver
- Touchpad Driver

On detail on how to run these utilities, please refer to the respective “*.doc” files.

The “Save-To-File” file

In order for the system to be able to perform the “**Save-To-File**”, the “**Save-To-File**” File needs to be created first. For detail on how the **Save-To-File (hibernation)** can be activated, refer to *Chapter 6.6* and *Chapter 11.6*. When being activated, the **Save-To-File** would actually save all the memory settings (system memory, video memory, and system status) to this file. When this file is being created, it will take up contiguous sectors in the HDD whose size would equal to the sum of the system memory, and video memory plus some overhead. Therefore, if you have just upgraded your system memory, you are requested to remove your old **Save-To-File** File, and then re-create a new one.

10.2 Windows 98 Drivers and Applications

At the time of this manual is written, the following Windows 98 Drivers and applications are available:

- Audio Driver
- Video Driver
- Touchpad Driver
- Modem Driver
- DVD Player Application
- Combo Modem Driver
- Combo LAN Driver
- SpeedStep Driver

These drivers are located in the directory “**WIN98**” of the CD-ROM disc. On detail on how to run these utilities, please refer to the respective “***.doc**” files.

10.3 Windows NT 4.0 Drivers and Applications

At the time of this manual is written, the following Windows NT 4.0 Drivers and applications are available:

- Video Driver
- Audio Driver
- Touchpad Driver
- Modem Driver
- Combo Modem Driver
- Combo LAN Driver

The Windows NT 4.0 drivers are located in the directory “**NT40**” of the CD-ROM disc. On detail on how to run these utilities, please refer to the respective “***.doc**” files.

10.4 Windows 2000 Drivers and Applications

At the time of this manual is written, the following Windows 2000 Drivers and applications are available:

- Video Driver
- Audio Driver
- Touchpad Driver
- Modem Driver
- Combo Modem Driver
- Combo LAN Driver

The Windows NT 4.0 drivers are located in the directory “Win2000” of the CD-ROM disc. On detail on how to run these utilities, please refer to the respective “*.doc” files.

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Chapter 11 Configuring Your System

11.1 Configuration Software

The **notebook** can easily be configured to suit your personal needs. The built-in SETUP program allows you to setup standard and advanced parameters as well as the **Power Management Features**. The information is stored in a battery-backed CMOS memory; so when the power is turned off, your setup is retained. This Configuration Software is sometimes refer to as CMOS Setup, BIOS Setup, or simply the SETUP.

Note: The SETUP can only be activated by pressing <F2> during system boot-up.

You are requested to perform the following one-time procedure immediately after you have **upgraded/reprogrammed** your BIOS:

- Press <F2> during system boot-up to get into the SETUP.
- Choose **Auto Configuration with Defaults**.
- Press **Enter**, and then select “Y” followed by **Enter**.
- Choose **Save Settings and Exit**, then **Enter**.
- Answer “Y” followed by **Enter**.
- The system will boot-up automatically. Press <F2> during system boot-up to get into the SETUP.
- Now, you can customize the BIOS for your personal needs.

For detail on the BIOS SETUP, read on.

Note: For information on the BIOS upgrade, contact your local **notebook** dealer.

11.2 Running the Setup Utility

You will be greeted by this screen when you enter the SETUP Utility.

AMIBIOS HIFLEX ENGLISH SETUP - VERSION 1.19 (C)2000 American Megatrends, Inc. All Rights Reserved
BIOS Revision 700A_A03
Standard CMOS Setup Advanced CMOS Setup System Security Setup Power Management Setup Boot Device Setup Peripheral Setup Change Language Setting Refresh Battery Auto Configuration with Defaults Save Settings and Exit Exit Without Saving
Standard CMOS setup for changing time, date, hard disk type, etc. ESC : Exit ↑↓ : Sel F3/F4 :Color F10 :Save & Exit

The above display screen will be referred to as **Setup Entry Screen**. Detail on the above major sub-menus (options) will be described on the following pages.

Movement within the SETUP utility

To move between the different item fields or to move between the sub-menus, use the arrow keys **↑**, **↓**, **←**, and **→**. To change the value of a field press the **PgUp** and **PgDn** keys. When you select one item, that item will be highlighted (in gray background) and a brief explanation will be displayed the near bottom or on the right side of the screen. The followings are some of the most commonly used keys:

- Pressing **<F3>**, **<F4>** will change the color of the screen.
- Pressing **<F10>** will save changes on settings and exit.
- Pressing **[Esc]** will get you to the **Setup Entry Screen** if you are in the sub-menu. If you are already in the **Setup Entry Screen**, pressing **[Esc]** will allow you to exit the SETUP utility.

11.3 Standard CMOS Setup

You will be greeted by this screen when you enter the **Standard CMOS Setup** Menu:

AMIBIOS SETUP - STANDARD CMOS SETUP									
(C)2000 American Megatrends, Inc. All Rights Reserved									
Date(mm/dd/yyyy): Sat Nov 06, 1999					Base Memory : 64 MB				
Time(hh/mm/ss) : 11:13:47									
Floppy Drive A: 1.44 MB 3½									
LBA Blk PIO									
32Bit									
Type	Size	Cyln	Head	Wpcom	Sec	Mode	Mode	Mode	
Pri Master : Auto	11513					On	On	Auto	
On									
Sec Master : Auto	CD/DVD					On	Off	Auto	
On									
Month: Jan - Dec							ESC: Exit		
↑↓: Sel									
Day: 01 - 31							PgUp/PgDn:		
Modify									
Year: 1901 - 2099							F3/F4:		
Color									

Date and Time:

Use the arrow keys ← and → to move among these fields to modify the settings. Use **PgUp** and **PgDn** keys to modify settings.

Floppy Drive A:

There are two options to this field: **1.44 MB 3½**, and **Not Installed**. In general, you should choose **1.44 MB 3½**.

Pri Master, and 32Bit Mode:

For **Pri Master** in general, you should choose the default value “**Auto**” to let the system automatically detect the IDE device you have in the system. For better performance, you should choose **On** for **32 Bit Mode** option.

Sec Master and 32 Bit Mode:

For **Sec Master**, you should choose the default value “**Auto**” to let the system automatically detect the DVD-ROM drive you have in the system. For better performance, you should choose **On** for **32 Bit Mode** option.

Boot Sector Virus Protect:

There are two options to this field: **Disabled**, and **Enabled**. You should choose **Enabled** so as to protect the system's boot sector from virus infection.

11.4 Advanced CMOS Setup

You will be greeted by this screen when you enter the **Advanced CMOS Setup** Menu:

AMIBIOS SETUP - ADVANCED CMOS SETUP		
(C)2000 American Megatrends, Inc. All Rights Reserved		
Video out Type	NTSC	Select the appropriate Video Standard for your country. 'NTSC' is for USA/Japan, and 'PAL' is for Europe.
LCD Panel View Expansion	On	
Internal Mouse	Enabled	
Suspend Warning Tone	Enabled	
Intel (R) SpeedStep (TM) Technology	Automatic	
		ESC: Exit ↑↓: Sel PgUp/PgDn: Modify F3/F4: Color

Video Out Type:

There are two options to this field: **NTSC**, and **PAL**. Depending on the type of television set used in your country, choose either **NTSC** or **PAL**. **NTSC** is commonly used in North America and Japan. And **PAL** is the most accepted standard in the European countries.

LCD Panel View Expansion:

There are two options to this field: **On** and **Off**. For example, if this field is set to **Off** and when the system resolution is set to 640x480, the display content would not be a full panel display. However, if this field is set to **On** and when the system resolution is set to 640x480, the display content would be expanded to full panel display. However, the quality of graphic/text of the expanded display may be adversely affected.

Internal Mouse:

There are two options to this field: **Enabled**, and **Disabled**. In general, you should choose **Enabled**.

Suspend Warning Tone:

There are two options to this field: **Enabled**, and **Disabled**. In general, you should choose **Enabled** to allow system to issue Suspend Warning Tone during/before entering suspend.

Intel (R) SpeedStep (TM) Technology:

There are three options to this field: **Automatic**, **Disabled**, and **Battery opt.**. This is a state-of-the-art power rationing feature supported by Intel's latest **SpeedStep** CPU (Pentium III 600/650/700/750MHz) whereby the CPU would be able to switch between full speed and optimized, as defined below:

Intel CPU Type	full speed	optimized speed
Pentium III SpeedStep 600MHz	600MHz	500MHz
Pentium III SpeedStep 650MHz	650MHz	500MHz
Pentium III SpeedStep 700MHz	700MHz	550MHz
Pentium III SpeedStep 750MHz	750MHz	600MHz

Depending on how the system is powered, either by AC source or by battery pack, the **SpeedStep** CPU would switch its CPU speed as according to the three options listed below:

Options	Powered by AC Adapter	Powered by Battery Pack
Automatic	full speed	optimized speed
Disabled	optimized speed	optimized speed
Battery Opt.	optimized speed	optimized speed

11.5 System Security Setup

You will be greeted by this screen when you enter the **System Security Setup** Menu:

AMIBIOS SETUP - SYSTEM SECURITY SETUP (C)2000 American Megatrends, Inc. All Rights Reserved		
Change Supervisor Password Enter	Press	If supervisor password is entered, the system requires the supervisor password to enter this Setup utility. Pressing Ctrl-Alt-Backspace locks up the keyboard until the password is entered. The Cap Lock and Scroll Lock LEDs will flash in sequence while waiting for the user to enter a password.
Change User Password Enter	Press	
Boot Password Required	No	
Resume Password Required	No	
		ESC: Exit ↑↓: Sel PgUp/PgDn: Modify F3/F4: Color

Change Supervisor Password:

The **Supervisor Password** provides access:

- to the SETUP Utility.
- to the system during system boot up, if **Boot Password** (refer to below in *Chapter 11.5*) is enabled.
- during resume from suspend (see **Suspend Option** in *Chapter 11.6*), if the **Resume Password** (refer to below in *Chapter 11.5*) is enabled.
- to unlock the keyboard, if keyboard is locked by pressing Ctrl-Alt-Backspace.

Change User Password:

The **User Password** provides access:

- to the system during system boot up, if **Boot Password** (refer to below in *Chapter 11.5*) is enabled.

- during resume from suspend (see **Suspend Option** in *Chapter 11.6*), if the **Resume Password** (refer to below in *Chapter 11.5*) is enabled.
- to unlock the keyboard, if keyboard is locked by pressing Ctrl-Alt-Backspace.

Boot Password Required:

There are two options to this field: **No**, and **Yes**. If this option is set to **Yes** and when **Supervisor Password** and/or **User Password** have been set, system would prompt for password during system boot up. In order to access the system, you need to enter either the **Supervisor Password** or the **User Password**.

Resume Password Required:

This option can be set only if the **Boot Password** is enabled. There are two options to this field: **No**, and **Yes**. If this option is set to **Yes** and when **Supervisor Password** and/or **User Password** have been set, system would prompt for password when resuming from suspend (see **Suspend Option** in *Chapter 11.6*). In order to access the system, you need to enter either the **Supervisor Password** or the **User Password**.

11.6 Power Management Setup

You will be greeted by this screen when you enter the **Power Management Setup** Menu:

AMIBIOS SETUP - POWER MANAGEMENT SETUP (C)2000 American Megatrends, Inc. All Rights Reserved		
Power Switch Button	Power	Use 'Power Button' to power the system On or Off. Use 'Sleep Button' to enter or resume from suspend mode.
Power Management Under AC Power	Off	
Power Saving Level	Off	
CPU Speed Control	100%	
Hard Disk Time-out	Off	
Video Time-out	Off	
Standby Time-out	Off	
Auto Suspend Time-out	Off	
LCD Suspend	Disabled	
Suspend Option	Suspend	
Auto Save To File	Disabled	
Panel Brightness	Auto	
Suspend Warning Tone	Enabled	
Remote Power On	Enabled	
Wake Up Alarm	Disabled	ESC: Exit ↑↓: Sel PgUp/PgDn: Modify F3/F4: Color
Resume Alarm Time	Off	

Power Switch:

There are two options to this field: **Power Button**, and **Sleep Button**. This field is for programming the Power Switch (see *Chapter 2.6* and then *Chapter 2.2*). If this field is set to **Power Button**, the **Power Switch** would behave as a normal power On/Off button. If this field is set to **Sleep Button**, there are four scenarios:

- If the **Power Switch** is pressed continuously for 4 seconds or more, the system would power off.
- If the **Power Switch** is pressed for less than 4 seconds, the **Suspend Option** is set to **Suspend** (also referred to as **STR**), and when system is operating; system would perform **Suspend-To-RAM**; whereby system can be woke up by **Power Switch**. This scenario is applicable only to WinNT's and Win98's APM mode.
- If the **Power Switch** is pressed for less than 4 seconds, the **Suspend Option** is set to **STF**, and when system is operating; system would perform **Suspend-To-File (STF)** or sometimes referred to as **hibernate/hibernation**; whereby system would save its

system memory and status into a system file. System can be woke up by the **Power Switch**. This scenario is applicable only to WinNT's and Win98's APM mode.

- If the **Power Switch** is pressed for less than 4 seconds when system is either in **STR** or **STF** mode, system would wake up from one of these two suspend modes. Waking up from **STR** is immediate. Waking up from **STF** take a little while. System appears to be powered off when it is in **STF** mode.

Note: For exact location of **Power Switch**, refer to diagram in *Chapter 2.2*. For detail on **Suspend Option**, refer to the **Suspend Option** below in *Chapter 11.6*. For detail on **Suspend** (also referred to as **STR**), **STF** and **APM vs ACPI**, refer to *Chapter 6.6* and *Chapter 6.7*.

Note: In **ACPI** operating systems (Windows 98 ACPI, and Windows 2000), the type of suspend the system would enter is determined and overridden by the related settings in the respective operating systems.

Power Management Under AC Power:

There are two options to this field: **Off** and **On**. When you have access to AC power, power management is not vitally important. For this reason, you might like to choose **Off**; by which all the "time-out" power management functions below would not be effective, if your system is powered by the AC power source. When **On** is chosen, the Power Management level is the same whether the AC power is connected, or not.

Power Saving Level:

There are four options to this field: **Off**, **Custom**, **High Perform**, and **Longest Life**. The setting of this field control the settings of the fields below: **CPU Speed Control**, **Hard Disk Time-out**, **Video Time-out**, **Standby Time-out**, and **Auto Suspend Time-out**.

- Setting this field to **Off** effectively sets these time-outs to **Off** as well.
- The **Longest Life** effectively set these time-outs to shorter time durations than those set by **High Perform**. Thus when **Longest Perform** is chosen, system is able operate without AC power source much longer than when is **High Perform** chosen.
- **Custom** provides you a power management template. You can use this template as a basis to customize your ~~CPU~~ time-outs scheme.

If your system is running on **APM (Advanced Power Management)** mode, you can switch between these 4 **Power Saving Levels** by pressing <Fn><F7>. The advantage of using <Fn><F7> is that you do not have to go through the trouble of entering the SETUP to switch between these levels. And <Fn><F7> is a cyclical switch that allows you to loop back to your original setting by pressing <Fn><F7> repeatedly. You would hear the following beeps when you enter the levels below:

Power Saving Levels	Beep Descriptions
Off	1 beep
Custom	2 beeps
High Perform	3 beeps
Longest Life	4 beeps

For more information on **APM** and **ACPI** modes, please refer to *Chapter 6.7*.

CPU Speed Control:

~~You would be able to set this field only when the **Power Saving Level** is set to **Custom**. There are four options to this field: **100%**, **50%**, **25%**, **12.5%**. Select the one that provides you the maximum power rationing while without entailing any noticeable degradation of performance.~~

Hard Disk Time-out:

You would be able to set this field only when the **Power Saving Level** is set to **Custom**. Select the time duration of which the hard disk would idle before spinning down. The amount of time for the hard disk to spin-up to its normal operating speed depends on its manufacturer and is around 3~5 seconds. If you are a performance-conscious user, you may like to set this field to **Off**.

Video Time-out:

You would be able to set this field only when the **Power Saving Level** is set to **Custom**. Select the time duration of which both the keyboard and mouse have no activity before turning off the LCD display. Any activities from keyboard or mouse would turn on the display immediately.

Standby Time-out:

You would be able to set this field only when the **Power Saving Level** is set to **Custom**. Select the time duration of which the system has no activity before entering **Standby**. In

Standby mode, the LCD display would be turned off. Any activities from keyboard or mouse would resume the system to its normal operation immediately.

Auto Suspend Time-out:

You would be able to set this field only when the **Power Saving Level** is set to **Custom**. Select the time duration of which the system has no activity before entering the type of suspend mode, as determined by the setting in **Suspend Option** below. **Suspend Option** has two option: **Suspend** (also referred to as **STR**) and, **STF**.

LCD Suspend:

There are two options to this field: **Disabled**, and **Enabled**. If this field is set to **Enabled**, system would enter the type of suspend mode (as determined by the setting in **Suspend Option**), when the LCD display is closed. **Suspend Option** has two option: **Suspend** (also referred to as **STR**) and, **STF**.

Suspend Option:

There are two options to this field: **Suspend**, and **STF**. **Suspend** can also be referred to as **Suspend-To-RAM (STR)**. **STF** stands for **Suspend-To-File**, and can also be referred to as **hibernate/hibernation**. **STF** provides as much as a power saving as if the system had been powered off. While **STR** provides less power saving than **STF**, **STR** saves more power than when the system is in **Standby** mode. The way to trigger a resumption from **STR** and **STF** are the same; by pressing the **Power Switch**. However resuming from **STF** takes a significantly more time than resuming from **STR**.

Auto Save To File:

There are two options to this field: **Disabled**, and **Enabled**. With this field set to **Enabled**, system would automatically enter **Save-To-File (STF)** mode after the system has been in **Suspend-To-RAM (STR)** mode continuously for 30 minutes.

Panel Brightness:

~~There are two options to this field: **Auto**, and **User Defined**. You can manually adjust the brightness of the display panel by using the hot keys: <Fn><F8>, and <Fn><F9>. With this field set to **Auto**, system would automatically lower its display brightness if there is not keyboard and mouse activity for 15 seconds. The display would resume to its user-manually selected brightness immediately after you invoke any keyboard or mouse activities.~~

Suspend Warning Tone:

There are two options to this field: **Enabled**, and **Disabled**. In general, you should enable the **Suspend Warning Tone** that beeps before the system enters the type of suspend designated by **Suspend Option**.

Remote Power On:

There are two options to this field: **Enabled**, and **Disabled**. If **Enabled**, system would resume from **STR** or **STF**, whenever there is any incoming call from the serial fax/modem, or request from LAN card.

Wake Up Alarm/ Resume Alarm Time:

Wake Up Alarm and **Resume Alarm Time** work hand-in-hand with one another. There are two options to **Wake Up Alarm**: **Disabled**, and **Enabled**. You would be able to set the **Resume Alarm Time** only if **Wake Up Alarm** has been set to **Enabled**. For example with these two fields set to **Enabled** and **8:00AM** respectively, the system would be able to wake (resume) itself from **Suspend** (also referred to as **STR**) or **STF** to normal operation at 8:00AM. The amount of time required to wake up from **STF** is somewhat longer than **STR**.

Note: The time-out settings in the Power Management Setup is not applicable to ACPI OS's: Win98 ACPI and Win 2000.
--

11.7 Boot Device Setup

You will be greeted by this screen when you enter the **Boot Device Setup** Menu:

AMIBIOS SETUP - BOOT DEVICE SETUP (C)2000 American Megatrends, Inc. All Rights Reserved		
Quick Boot	Enabled	"Enabled" allows the system to skip part of test during system is booting.
Silent Boot	Enabled	
Boot Display Device Mode	Simul.	
BootUp Num-Lock	Off	
1 st Boot Device	CD/DVD	
2 nd Boot Device	Floppy	
3 rd Boot Device	1 st IDE-HDD	
Try Other Boot Devices	Yes	
		ESC: Exit ↑↓: Sel PgUp/PgDn: Modify F3/F4: Color

Quick Boot:

There are two options to this field, **Enabled** and **Disabled**. **Enabled** allows the system to skip part of the **Power On Self Test (POST)** during system boot up.

Silent Boot:

There are two options to this field, **Enabled**, **Disable**, and **Black**. **Enabled** allows the system to display the **ARIMA** logo screen during system boot up. Otherwise, a "**black**" screen would be displayed. This "black" screen would last for about 20 seconds, and would appear as if the system has no response. This Disable screen is very much identical to the Black screen.

Boot Display Device:

There are three options to this field: **Simul. Mode**, **LCD Only**, and **CRT Only**. As names of these options imply, **LCD Only** and **CRT Only** have the system boot up with the designated display device “only”. When **Simul. Mode** is chosen, both the LCD and CRT would be displayed “simultaneously” if a CRT is connected to the system.

BootUp Num-Lock:

There are two options to this field: **Off**, and **On**. If **On** is selected, system would automatically enable **Num-Lock** during System boot up.

1st Boot Device:

There are five options to this field: **Disabled**, **IDE HDD**, **Floppy**, **CD/DVD**, and **Network**. In general, you should use **CD/DVD** as the system's first choice of boot device.

2nd Boot Device:

There are four options to this field: **Disabled**, **IDE HDD**, **Floppy**, and **CD/DVD**. In general, you should use **Floppy** as the system's second choice of boot device.

3rd Boot Device:

There are four options to this field: **Disabled**, **IDE HDD**, **Floppy**, and **CD/DVD**. In general, you should use **IDE HDD** as the system's third choice of boot device.

Try Other Boot Devices:

There are two options to this field: **Yes**, and **No**. If **Yes** has been selected and all 3 **Boot Devices** above fail to boot the system, system would attempt to boot from other devices: such as through LAN card, and PCMCIA SCSI devices.

11.8 Peripheral Setup

You will be greeted by this screen when you enter the **Peripheral Setup** Menu:

AMIBIOS SETUP - PERIPHERAL SETUP (C) 1998 American Megatrends, Inc. All Rights Reserved	
Internal Hard Drive Enabled OnBoard Serial Port1 Auto OnBoard Parallel Port1 ECP	Available Options: Enable Disabled ESC: Exit ↑↓: Sel PgUp/PgDn: Modify F3/F4: Color

Internal Hard Drive:

There are two options to this field: **Enable**, and **Disabled**. In general, you should choose **Enabled**.

OnBoard Serial Port1:

There are two options to this field: **Auto**, and **Disabled**. In general, you should choose **Auto**.

OnBoard Parallel Port1:

There are three options to this field: Normal, EPP and **ECP**. In general, you should choose **ECP**.

11.9 Auto Configuration With Defaults

This mini menu allows you to reload the SETUP to its preset default values.

Warning: After loading the COMS to its preset values, the previous changes you had made and saved in SETUP will be lost.

11.10 Save Settings and Exit

This mini menu allows you to save the changes you have just made before exiting the SETUP. If you have made changes to the SETUP settings, you should use this option. Otherwise, the changes would be lost.

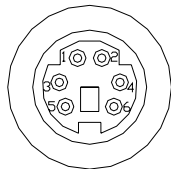
11.11 Exit Without Saving

This mini menu allows you to exit the SETUP without saving the changes you have just made. If you have made changes to the SETUP settings and you want to discard such changes, you should use this option.

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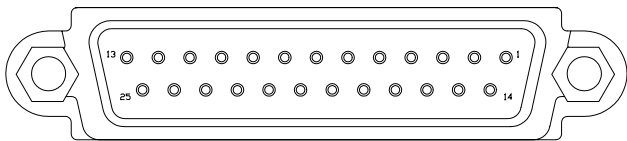
Appendix A - Connectors and Pin Assignments

A.1 Keyboard or PS/2 Mouse Connector



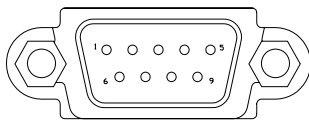
PIN	Assignment	PIN	Assignment
1	Keyboard data	4	+5V
2	No Connection	5	Keyboard clock
3	Ground	6	No connection

A.2 Printer Port Connector



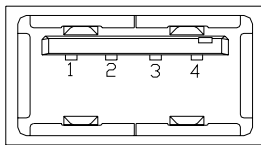
PIN	Assignment	PIN	Assignment	PIN	Assignment
1	STROBE #	10	Acknowledge	19	GROUND
2	DATA 0	11	BUSY	20	GROUND
3	DATA 1	12	Paper Empty	21	GROUND
4	DATA 2	13	Selected	22	GROUND
5	DATA 3	14	Auto Feed #	23	GROUND
6	DATA 4	15	ERROR #	24	GROUND
7	DATA 5	16	INITIALIZE	25	GROUND
8	DATA 6	17	SLIN #		
9	DATA 7	18	GROUND		

A.3 Communication Port Connector



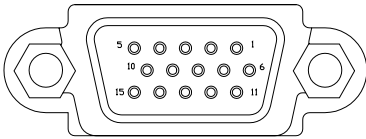
PIN	Assignment	PIN	Assignment	PIN	Assignment
1	Carry detect	4	Data Terminal	7	Req. to send
2	Received data	5	GROUND	8	Clear to send
3	Transmit data	6	Data Send	9	Ring indicator

A.4 USB Port Connector



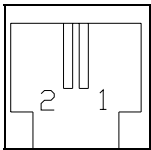
PIN	Assignment	PIN	Assignment
1	+5VS	2	USBP0-
3	USBP0+	4	GND

A.5 VGA Monitor Connector



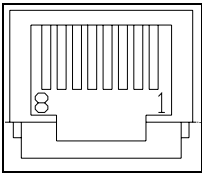
PIN	Assignment	PIN	Assignment	PIN	Assignment
1	RED	6	GROUND	11	N.C.
2	GREEN	7	GROUND	12	N.C.
3	BLUE	8	GROUND	13	HSYNC
4	N.C.	9	N.C.	14	VSYNC
5	GROUND	10	GROUND	15	N.C.

A.6 Modem/Phone Connector (RJ11)



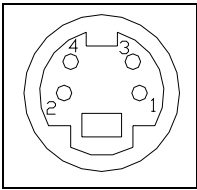
PIN	Assignment
1	TIP
2	RING

A.7 LAN Connector (RJ45)



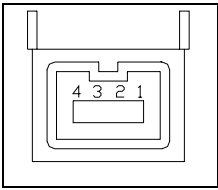
PIN	Assignment	PIN	Assignment
1	TX+	5	GND
2	TX-	6	RX-
3	RX+	7	GND
4	GND	8	GND

A.8 S-Video Connector



PIN	Assignment	PIN	Assignment
1	GND	3	Y
2	GND	4	C

A.9 IEEE 1394 Connector



PIN	Assignment	PIN	Assignment
1	TPB0	3	TPA0
2	TPB0#	4	TPA0#

Okoh, Please verify this.

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Appendix B - Hot-Keys

To use the **Hot Keys**, press and hold down <Fn> together with the key described below:

**Internet Mail Hot Key**

User can program this Hot Key to activate an Internet Mail application.

**Mail Hot Key**

User can program this Hot Key to activate a Mail application.

**Audio CD Hot Key**

User can program this Hot Key to activate an Audio CD application.

**Suspend-To-RAM Hot Key**

Press this Hot Key to let system enter **Suspend-To-RAM** mode. For more detail on **Suspend-To-RAM**, refer to *Chapter 6.6*, and *Chapter 11.6*.

**Suspend-To-Disk Hot Key**

Press this Hot Key to let system enter **Suspend-To-Disk** mode. For more detail on **Suspend-To-Disk**, refer to *Chapter 6.6*, and *Chapter 11.6*.

**LCD/CRT Hot Key**

Press this Hot Key to switch between LCD only, CRT only, LCD/CRT simultaneous, and TV only displays.

**Contrast Decrease Hot Key**

Press this Hot Key to decrease the contrast of the DSTN (LCD) display.

**Contrast Increase Hot Key**

Press this Hot Key to increase the contrast of the DSTN (LCD) display.

**Brightness Decrease Hot Key**

Press this Hot Key to decrease the brightness of the LCD display.

**Brightness Increase Hot Key**

Press this Hot Key to increase the brightness of the LCD display.

**Volume Decrease Hot Key**

Press this Hot Key to decrease volume.

**Volume Increase Hot Key**

Press this Hot Key to increase volume.

Appendix C - Glossary

ACPI **A**dvanced **C**onfiguration **P**ower **I**nterface. A latest power management standard jointly developed by Microsoft, Intel, and Toshiba.

APM **A**dvanced **P**ower **M**anagement. An operating and application level of power management. Your **notebook** is fully compatible with this standard.

BIOS Basic Input Output System. In the manual, we refer the BIOS as Setup. To change the BIOS, press <F2> during system re-boot. For more information, see *Chapter 11*.

BIT A binary digit. The smallest unit of measure used in a computer. It takes 8 bits to make a byte.

BOOT To load a program or operating system into the memory to start the computer.

BUS Electrical circuit within the system used to transmit data from one device to another.

BYTE 8 bits. 1,024 Bytes is called 1KB. A million Bytes is called a megabyte, or MB.

CACHE A place in the CPU where the computer can temporarily store data to avoid accessing the HDD and FDD drives. There is also an external on-board 512KB fast write-through cache in your **notebook** to improve performance.

CD-ROM Compact Disc-Read Only Memory. It stores up to 640MB of information per disc.

CMOS Complementary Metal-Oxide Semi-conductor. This low-power consumption module is capable of keeping the BIOS setup even the **notebook** is powered off.

CPU Central Processing Unit. Your **notebook** is compatible with Pentium® CPUs.

CRT Cathode Ray Tube. Another name is for an external monitor.

DMA Direct Memory Access. Your **notebook** supports two DMA's and both can be used.

DOS Disk Operating System.

DRAM Dynamic Random Access Memory, also known as **RAM**.

DSTN Dualscan Twist Neu-matic. Double the performance compared to STN, but less than TFT. **DSTN** also known as Dual-Scan color.

ECP Extended Capabilities Port. This bi-directional communication mode is faster than the EPP, and SPP mode; and allows the system to connect up to seven devices through parallel interface.

EPP Enhanced Parallel Port. This bi-directional communication mode is faster than the SPP, but slower than the ECP mode.

FDD Floppy Diskette Drive. You can use any 3.5" diskette that has a storage capacity of 1.44MB or 720KB.

FORMAT Preparing a disk (floppy or HDD) for use in an OS. **Formatting** erases all the information on the disk.

HDD Hard Disk Drive.

HIBERNATION mode, or **Suspend To Disk** mode, saves all memory, so system can re-start at where **Suspend To Disk** was invoked.

IDE Integrated (or Intelligent) Drive Electronics. Standard HDD type used in **notebooks**.

I/O Input/Output, used for different kind of communications between devices.

IRQ Interrupt Request, every device has an IRQ number. If two devices share the same number, there will be a conflict and then none of the devices will work.

IrDA Infrared Data Association, a standard for infrared ray data transmission.

ISA A standard for 8 and 16-bit expansion cards. This standard is also referred as AT-bus. The speed on the bus is 8MHz.

KB Kilo Byte (1024 bytes).

LAN Local Area Network. A group of computers connected together to share information and resources. There are many different standards for LAN: ETHERNET, Token Ring, etc...

LCD Liquid Crystal Display. A common name for your **notebook's** screen.

Local-Bus The speed of Local-Bus is vastly superior than the AT-Bus (8MHz).

MB Mega Byte (1 million bytes).

Mouse A pointing device to move your cursor under certain software, such as Windows, and OS/2.

MPEG A stands for Motion Picture Experts Group. It supports real-time, full-motion video, audio data compression and decompression.

OS Operating System. There are many different types like: MS-DOS, Windows, OS/2, UNIX, etc...

PARTITION A logical unit created on the HDD, which is seen to the OS as a separate drive.

PIXEL Image elements (small points), that compose a screen image.

PCMCIA Personal Computer Memory Card International Association. A small credit-card size accessory that can contain memory, Fax/ Modem, SCSI adapter, etc... Also known as PC card.

POST Power-On-Self-Test. Every-time you power on the **notebook**,

POST runs many different tests to insure the system will operating properly.

RAM Random Access Memory. See **DRAM**.

ROM Read Only Memory. This memory contains the BIOS where all the information about your **notebook** is stored.

SPP Standard Parallel Port. This bi-directional communication mode is slower than the EPP and ECP modes. Also see EPP and ECP.

TFT Thin Film Transistor. The speed and resolution is better than the **DSTN** display. **TFT** is also known as Active Matrix.

TouchPAD A pointing device that uses your finger to glide the cursor.

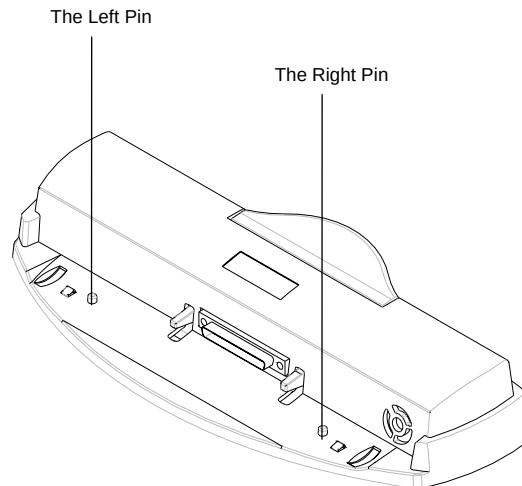
UART Universal Asynchronous Receiver/Transmitter. The UART is compatible to NS16550. Used for high speed serial port connections.

VGA Video Graphics Array. A standard for 640x480 resolution. Most computers have higher resolution: 800x600 or 1024x768 (SVGA).

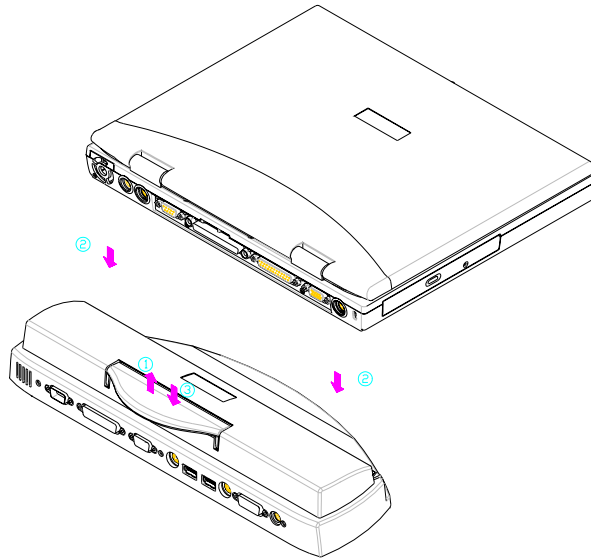
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Appendix D - Port Replicator

The **Port Replicator** is a convenient device if you do travel a lot with your **notebook**, and yet you like to establish quick connections to your host of external devices; whether you be at home, or in the office. In addition, the **Port Replicator** provides one more connector, the game port, that is not available to your standard notebook.



There are two **pins** on the **Port Replicator**. The purpose of these **pins** is to station the **notebook** onto the **Port Replicator** by pegging into the two **pin holes** on the back of the **notebook**. For exact location of the two **pin holes**, refer to diagram in *Chapter 6.8*.



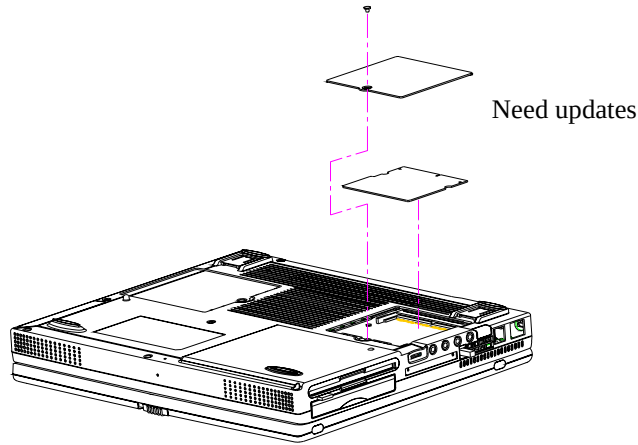
Follow the steps below to engage the **Port Replicator**:

- Lift up the handle as shown by **arrow 1**.
- Put the notebook system down as shown by **arrow 2**. Make sure the 2 **pins** are pegged into the **pin holes** that are located on the chassis of the system unit.
- Press the handle down as shown by **arrow 3**.

Reverse the steps above to disengage the **Port Replicator**.

Appendix E - The LAN/Modem Combo Card

The optional LAN/Modem Combo Card combines two functions into one card: namely the Ethernet LAN connection, and Fax/Modem connection. The LAN/Modem Combo socket is conveniently located on the chassis of the system unit. Below is the procedure on how to install this combo card.



- Power off the system unit; and have it flipped upside down.
- Un-screw the screw that locks the door of the combo compartment.
- Insert the combo card into its socket. For detail on how to insert this combo card, please refer to the second diagram in *Chapter 7.2*.
- Install the related drivers. For detail, please refer to *Chapter 10*.

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Appendix F - Other Keyboards

The following keyboards are also available to your **notebook**:

- Belgium Keyboard
- Canadian French Keyboard
- Chinese Keyboard
- Czechoslovakian Keyboard
- Denmark Keyboard
- French Keyboard
- German Keyboard
- Italian Keyboard
- Japanese Keyboard
- Korean Keyboard
- Polish Keyboard
- Spanish Keyboard
- Sweden Keyboard
- Swiss German Keyboard
- Swiss Keyboard
- UK Keyboard
- US International Keyboard
- US Keyboard

Please consult your dealer on the above keyboards.

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Appendix G - Error Log

Your Name : _____
Phone # : _____
Fax # : _____

Tested System Name: _____ S/N: _____ Date: 200__-__-__

CPU (K6):	☐ 300MHz	☐ 333MHz	☐ 350MHz	☐ 380MHz	☐ 400MHz
Memory:	☐ 32MB	☐ 64MB	☐ 96MB	☐ 128MB	☐ 256MB
Display:	☐ TFT	☐ DSTN	☐ CRT	☐ LCD+CRT	☐
HDD:	_____ MB	Manufacturer: _____	☐		Model _____
Revisions:	BIOS _____	VGA _____	PCMCIA _____	☐ Utility _____	☐ _____
OS:	☐ Win98 _____	☐ WinNT _____	☐ Win2K _____	☐ WinME _____	☐ _____

Peripherals Attached: _____

Sound Card: ☐ Enabled ☐ DMA ☐ IRQ ☐ Ext. Micro. ☐ _____
☐ Internal Fax/Modem ☐ Mouse _____ ☐ Printer _____

PCMCIA card: ❶ Network ❷ Fax/Modem ❸ Memory

☐ PCMCIA Card Type: Name: _____ Revision: _____ IRQ _____
DMA _____

☐ PCMCIA Card Type: _____ Name: _____ Revision: _____ IRQ _____
DMA _____

Software where problem occurs:

Name: _____ Rev.: _____ Error Message: _____

Following pages attached: (screen copies or listings)

☐ Config.sys	☐ Autoexec.bat	☐ Advanced BIOS setup
☐ Power Management Setup		

If you have any problems with your **notebook**, especially with software or hardware compatibility we would like to hear from you so we can maintain 100% compatibility. Therefore if you find any problem, please fill-out this report and fax to your local dealer for technical support.

If you have tried many different settings or configurations, like IRQ, DMA, LCD or CRT, mark all of them so that we can repeat the problem under the same configuration(s).

Attach another page with detail description of your problem or use the backside.

Your cooperation is most appreciated!

Problem description: _____

Appendix H - Agency Regulatory Notices

H.1 Safety Instructions



CAUTION: Please read these safety instructions carefully.



CAUTION: Please keep this User's Manual for future reference.



CAUTION: Please disconnect this equipment from AC outlet before cleaning. DO NOT use liquid or sprayed detergent for cleaning. Use a clean moistened cloth.



CAUTION: The wall socket used should be positioned near the equipment and should be easily accessible.



CAUTION: Please keep this equipment free from humidity.



CAUTION: Place the equipment on a reliable surface at all times. A drop or fall can cause severe damage.



WARNING: The openings on the enclosure are for air ventilation and is meant to protect the equipment from overheating. DO NOT COVER THE VENTILATION OPENINGS.



CAUTION: Verify the voltage of the power source before connecting the unit to any power outlet.



WARNING: DO NOT step on or place anything over the power cord.



CAUTION: All cautions and warnings on the equipment should be noted.



WARNING: If the equipment is not used for a long period of time, disconnect the equipment from the power source to avoid damage from power spikes.



WARNING: NEVER pour any liquid into any openings; a fire or electrical shock is possible.



WARNING: For safety reasons; other than pre-designated ports and doors, the equipment should be opened only by qualified service personnel.



CAUTION: If one of the following situations should arise, the equipment should be checked by an authorized technician:

- a. The power cord or plug is damaged.
 - b. Liquid has penetrated into the equipment.
 - c. The equipment has been exposed to excessive moisture.
 - d. The equipment does not work well or you can not get it to work according to user's manual.
 - e. The equipment has been dropped or damaged.
 - f. The equipment has obvious signs of breakage.
-
-



CAUTION: DO NOT LEAVE THIS EQUIPMENT IN TEMPERATURES BELOW -20°C(-4°F) OR ABOVE 60°C(140°F). IT MAY CAUSE DAMAGE TO THE EQUIPMENT.



WARNING: To reduce the risk of electrical shock, always ensure that the modem line is disconnected from the telephone network while installing your system or when opening the equipment's enclosure.



WARNING: Never install modem/telephone wiring during a lightning storm.



WARNING: Never install modem/telephone jacks in wet locations unless the jack is specially designed for wet locations.



WARNING: Never touch un-insulated modem/telephone wires or terminals unless the modem/telephone line has been disconnected at the network interface.



CAUTION: Use caution when installing or modifying modem/telephone lines.



WARNING: Avoid using a modem/telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.



WARNING: THE CD-ROM/DVD-ROM IN THIS NOTEBOOK EMPLOYS A LASER SYSTEM.

- a. To ensure proper use of this product, please read the relevant instructions carefully and retain for future reference.
- b. Should the unit ever require maintenance, contact your local dealer.
- c. Use of controls, adjustments or the performance of procedures other than those specified may result in hazardous radiation exposure.
- d. To prevent direct exposure to Laser Beam, do not try to open the enclosure.



CAUTION: The internal CD-ROM/DVD-ROM drive is classified as a **CLASS 1 LASER PRODUCT**. Label is located on the outside of the CD-ROM/DVD-ROM drive with the following wordings:

**CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT**



WARNING: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Explosionsgefahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.



WARNING: This computer contains an internal lithium battery-powered real-time circuits. There is a risk of explosion and injury if the battery is incorrectly replaced or handled. Do not attempt to recharge, disassembled, immerse in water, or dispose of it in fire. Replacement should be done by your note dealer.



WARNING: Your notebook contains a NiMH or Li-Ion battery pack. There is a risk of fire and chemical burn if the battery pack is handled improperly. Do not disassemble, crush, puncture, short external contact, dispose of in water or fire, or expose it to temperature higher than 60°C.



WARNING: Handle the battery pack very carefully. Avoid touching the metal leads on the connector of the battery case.



CAUTION: Use only approved AC Adapter with your notebook. Using the wrong type of AC Adapter may cause serious damage to your notebook.



CAUTION: The AC Adapter can accept a line voltage ranging from 100V to 240V and is compatible with most international power sources. If you are unsure whether your power source is compatible, please contact the local dealer for assistance.

H.2 Agency Notice

Declaration of Conformity - United States Only

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions regarding this declaration, contact:

ARIMA Computer (Texas) Corp.
9600 W. Gulf Bank Road,
Houston, TX 77040, U.S.A.
Tel: 1-713-983-0777
Fax: 1-713-983-0720

To identify this product, refer to the model number found on the product.

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by the manufacturer responsible for compliance may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Canadian Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Avis Canadien

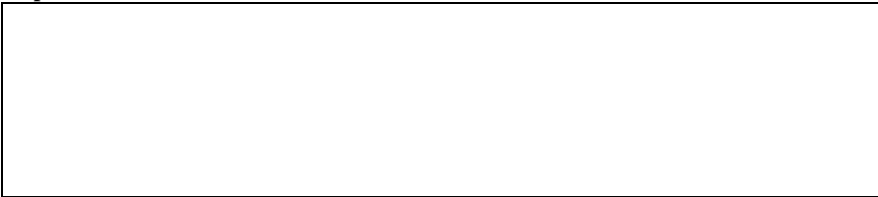
Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Notice

Product with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN55022 (CISPR 22)—Radio Frequency Interference
- EN50082-1 (IEC801-1, IEC801-3, IEC801-4)—Electromagnetic Immunity
- EN60950 (IEC950)—Product Safety

Japanese Notice**U.S. Regulations Governing the Use of Modems**

This equipment complies with Part 68 of the FCC Rules. On this equipment is a label that contains, among other information, the FCC registration number and

Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.

If your telephone equipment causes harm to the telephone network, the Telephone Company may discontinue your service temporarily. If possible, they will notify in advance. But, if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect proper operation of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

The FCC prohibits this equipment to be connected to party lines or coin-telephone service.

In the event that this equipment should fail to operate properly, disconnect the equipment from the phone line to determine if it is causing the problem. If the problem is with the equipment, discontinue use and contact your dealer or vendor.

The FCC also requires the transmitter of a FAX transmission be properly identified (per FCC Rules Part 68, Sec 68.381 (C) (3)).

Japanese Modem Notice

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U.K. Modem Compliance Information

This modem is approved by the secretary of state at the Department of Trade and Industry for connection to a single exchange line of the public switched telephone network run by certain licensed public telecommunication operators or system connected there to (Direct exchange lines only, not shared service or 1-1 carrier systems).

This modem is also suitable for connection to Private Automatic Branch Exchange (PABX's) which return secondary proceed indication.

If this modem is to be used with a PBX which has extension wiring owned by BT, connection of the modem the PBX can only be carried out by BT; or by the authorized maintainer of the PBX unless the authorized maintainer has been given 14 days written notice that the connection is to be made by another person; and that period of notification has expired.

This modem is suitable for use only on telephone lines proved with Loop Disconnect or Multi-Frequency Dialing Facilities.

Users of this modem are advised that the approval is for connection to the PSTN via the telephone line interface supplied with it. Connection of a modem to the PSTN by any other means will invalidate the approval.

There is no guarantee of correct working in all circumstances. Any difficulties should be referred to your supplier.

Some network operators require that intended users of their network request permission to connect and for the installation of an appropriate socket.

The Ringer Equivalence Number (REN) of this modem is 1. REN is guide to the maximum number of apparatus that can simultaneously be connected to one telephone line. The REN value of each apparatus is added together, and should not exceed 4. Unless otherwise marked, a telephone is assumed to have a REN of 1.

This modem is only approved for use of the following facilities:

- Storage of telephone numbers for retrieval by a predator mined code.
- Detection of initial proceed indication.
- Automatic calling/ automatic answering.
- Tone detection.
- Loud-speaking facility.

This modem is not approved for connection to U.K./private speech-band services. This modem does not support an automatic re-dial function. Any other usage will invalidate

the approval of your modem, if as a result, it then ceases to confirm to the standards against which approval was granted. The approval of this modem is invalidated if the apparatus is subject to modification in any material way not authorized by the BABT or if it is used with, or connected to external software that have not been formally accepted by BABT.

500V User's Manual

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